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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,479	12/23/2005	Bong-Hoon Lee	11281-090-999	6178

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EXAMINER
BLEVINS, JERRY M

ART UNIT	PAPER NUMBER
2883	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,479	LEE ET AL.	
	Examiner	Art Unit	
	Jerry Martin Blevins	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 9, 13, 14, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2005/0008305 to Brown et al.

Regarding claim 9, Brown teaches a tube for installing an optical fiber unit which is to be installed in a communication pipe (Figure 1) comprising an inner layer (comprising tubes 3 for which the optical fiber units are installed) defining an opening for receiving the optical fiber unit (paragraph 28) and having a lubricous component for decreasing friction against the optical fiber unit (paragraphs 9-11) and a sheath (5) provided around the inner layer (Figure 1) and made of polymer with a lower coefficient of friction than polyethylene in order to decrease friction when the tube is installed in the communication pipe (paragraph 3).

Regarding claim 13, Brown teaches that the sheath includes a lubricous component (Figure 1, element 7) so as to decrease friction between the tube and the communication pipe (paragraph 11).

Regarding claim 17, Brown teaches that the polymer is polyethylene (paragraph 28) containing a lubricous component (Figure 1, element 7).

Regarding claims 14 and 18, Brown teaches that the lubricous component is silicon, carbon, or PBT (paragraph 28).

Regarding claim 19, Brown teaches that the inner layer and sheath are made of the same material (namely extruded medium density polyethylene, as taught in the abstract and throughout the text).

Regarding claim 20, Brown teaches a tube for installing an optical fiber unit which is to be installed in a communication pipe (Figure 1) wherein the tube is made of a single layer (comprising tubes 3 for which the optical fiber units are installed) made of polymer having a lower coefficient of friction than polyethylene so as to decrease friction against the optical fiber unit contacted with an inner circumference of the tube while the optical fiber unit is installed the tube is installed (paragraph 28) by gas pressure as well as friction generated on the outer circumference of the tube (paragraphs 30-33) while the tube is installed in the communication pipe.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10, 12, 15, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of US 2003/0123824 to Tatarka et al.

Regarding claims 10 and 12, Brown teaches the limitations of the base claim 9. Brown does not teach a reinforcing layer between the inner layer and the sheath. Tatarka teaches a reinforcing layer (Figure 1, strength members 144) made of polyethylene (paragraph 24) between an inner layer (124) and sheath (132) for increasing the strength of a tube (100). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the reinforcing layer of Tatarka in the tube of Brown. The motivation would have been to increase strength of the tube.

Regarding claim 15, Brown in view of Tatarka renders obvious the limitations of the base claim 10. Brown also teaches that the sheath includes a lubricous component (Figure 1, element 7) so as to decrease friction between the tube and the communication pipe (paragraph 11).

Regarding claim 16, Brown in view of Tatarka renders obvious the limitations of the base claim 15. Brown also teaches that the lubricous component is silicon, carbon, or PBT (paragraph 28).

Regarding claim 21, Brown teaches the limitations of the base claim 20. Brown does not teach that the layer is composed of PBT. Tatarka teaches a tube layer composed of PBT (paragraph 20). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the tube layer of Brown out of PBT, as taught by Tatarka. The motivation would have been to decrease friction between the tube and the optical fiber unit.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Tatarka as applied to claim 10 above, and further in view of US 6,370,303 to Fitz et al.

Regarding claim 11, Brown in view of Tatarka renders obvious the limitations of the base claim 10. Neither Brown nor Tatarka explicitly teach a reinforcing layer with tensile strength higher than 20 MPa. Fitz teaches a reinforcing member for strengthening a tube for installing an optical fiber unit with a tensile strength higher than 20 MPa (column 7, line 66 – column 8, line 7). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the reinforcing layer of Tatarka of material having tensile strength higher than 20 MPa, as taught by Fitz. The motivation would have been to reduce bending of the optical fiber unit (Fitz, column 7, line 66 – column 8, line 7).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMB

Frank G. Font
Supervisory Patent Examiner
Technology Center 2800